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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/749,286	12/26/2000	Gene R. Anderson	1613370-0009	5844

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PATENT DEPARTMENT
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EXAMINER

PYO, KEVIN K

ART UNIT	PAPER NUMBER
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2878

DATE MAILED: 11/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/749,286

Applicant(s)

ANDERSON ET AL.

Examiner

Kevin Pyo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-61 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-61 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 March 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 14, 16.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3-5, 7-9, 11-17, 19, 21, 34, 35, 38, 42-44, 46-48 and 50 are rejected under 35 U.S.C. 102(b) as being anticipated by Kropp (U.S. Pat. No.5,997,185).

Regarding claim 1, Kropp shows in Fig.2 the following elements of applicant's invention:

a) an array of optoelectronic devices (21a-21n); b) an array of optical elements (30b-30n), the array of optical elements positioned relative to the array of optoelectronic devices in such a manner that one or more optical elements is optically aligned to one or more optoelectronic devices (Fig.2); c) a light receiving device (22); and d) a reflector (28) proximate to the array of optical elements (30b-30n), the reflector optically oriented with the array of optoelectronic devices and the light receiving device such that an emission from at least one optoelectronic device (21a) is reflected on at least a portion of the light receiving device (22).

Regarding claims 3, 4, 42 and 43, the limitations therein are shown in Fig.2.

Regarding claims 5 and 44, the limitation therein is disclosed in col.2, line 44.

Regarding claims 7 and 46, Kropp discloses the recited ferrule (20; the block element 20 of Fig.2 of Kropp should read on the recited ferrule since the specification discloses the block element (112) as a ferrule).

Regarding claims 8 and 47, the limitation therein is shown in Fig.2.

Regarding claims 9 and 48, Kropp discloses a photodetector (col.5, line 34).

Regarding claims 11 and 50, the limitation therein is disclosed in col.4, lines 60-64.

Regarding claims 12-17, 19, 21, 35 and 38, Kropp discloses that the side walls of the cone shaped depression (29) are metallized or provided with a reflective coating (col.6, lines 2-3; col.3, lines 8-10), wherein the depression is arranged on the first side of the coupling element (20).

Regarding claim 34, Kropp shows in Fig.2 the following elements of applicant's invention: a) an array of optoelectronic devices (21a-21n); b) an array of optical elements (30b-30n), the array of optical elements positioned relative to the array of optoelectronic devices in such a manner that one or more optical elements is optically aligned to one or more optoelectronic devices (Fig.2); c) a light receiving device (22); and d) a reflector (28) adapted to a first end of the array of optoelectronic devices and a first end of the light receiving device, wherein an emission from at least one optoelectronic device (21a) is reflected on at least a portion of the light receiving device (22) by the reflector (28).

3. Claims 1, 3, 4, 7-9, 11-14, 19, 21, 34, 42, 43, 46-48 and 50 are rejected under 35 U.S.C. 102(b) as being anticipated by Stange et al (WO 97/25638).

Regarding claim 1, Stange et al shows in Figs.5-8 the following elements of applicant's invention: a) an array of optoelectronic devices (45a-45n); b) an array of optical elements (53b-53n), the array of optical elements positioned relative to the array of optoelectronic devices in such a manner that one or more optical elements is optically aligned to one or more optoelectronic devices (Fig.5); c) a light receiving device (42); and d) a reflector (48) proximate to the array of optical elements (53b-53n), the reflector optically oriented with the array of

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optoelectronic devices and the light receiving device such that an emission from at least one optoelectronic device (45a) is reflected on at least a portion of the light receiving device (42).

Regarding claims 3, 4, 42 and 43, the limitations therein are shown in Fig. 5.

Regarding claims 7 and 46, Stange et al discloses the recited ferrule (43; the block element 43 of Fig. 5 of Stange et al should read on the recited ferrule since the specification discloses the block element (112) as a ferrule).

Regarding claims 8 and 47, the limitation therein is shown in Fig. 5.

Regarding claims 9 and 48, Stange et al discloses a photodetector (42).

Regarding claims 11 and 50, the device of Stange et al inherently comprises a feedback loop (Figs. 7 and 8).

Regarding claims 12-14, 19 and 21, Stange et al discloses that the side walls of the recess (51 and 52) are reflective, wherein the recess is arranged on the first side of the coupling element (43).

Regarding claim 34, Stange et al shows in Figs. 5-8 the following elements of applicant's invention: a) an array of optoelectronic devices (45a-45n); b) an array of optical elements (53b-53n), the array of optical elements positioned relative to the array of optoelectronic devices in such a manner that one or more optical elements is optically aligned to one or more optoelectronic devices (Fig. 5); c) a light receiving device (42); and d) a reflector (48) adapted to a first end of the array of optoelectronic devices and a first end of the light receiving device (Fig. 6), wherein an emission from at least one optoelectronic device (45a) is reflected on at least a portion of the light receiving device (42) by the reflector (48).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2, 6, 10, 18, 20, 22-33, 39-41, 45, 49 and 53-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kropp.

Regarding claims 22 and 36, Kropp differs from the claimed invention in that it does not disclose an optical resin is used as the recited reflector. However, the specific material used for a reflector would have been obvious to one of ordinary skill in the art since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

Regarding claims 24 and 25, the limitations therein are shown in Fig.2.

Regarding claim 26, the limitation therein is disclosed in col.2, line 44.

Regarding claim 28, Kropp discloses the recited ferrule (20; the block element 20 of Fig.2 of Kropp should read on the recited ferrule since the specification discloses the block element (112) as a ferrule).

Regarding claim 29, the limitation therein is shown in Fig.2.

Regarding claim 30, Kropp discloses a photodetector (col.5, line 34).

Regarding claims 32 and 52 the limitation therein is disclosed in col.4, lines 60-64.

Regarding claims 33, 53-57, 59 and 61, Kropp discloses that the side walls of the cone shaped depression (29) are metallized or provided with a reflective coating (col.6, lines 2-3; col.3, lines 8-10).

Regarding claims 2, 23, 41 and 51, Kropp differs from the claimed inventions in that it does not disclose optical fibers are used as the recited optical elements. However, the specific elements used as an optical element would have been obvious to one of ordinary skill in the art in view of design requirements, manufacturing cost, the desired accuracy of a device, etc.

Regarding claims 6, 27 and 45, the exact optical elements utilized in the device of Kropp would have been obvious to one of ordinary skill in the art in view of design requirements.

Regarding claims 10, 31 and 49, the exact light receiving element utilized in the device of Kropp would have been obvious to one of ordinary skill in the art in view of design requirements and the desired performance.

Regarding claims 18, 20, 37, 39, 40, 58 and 60, the specific shape of a reflector and the exact element used for a reflector would have been obvious to one of ordinary skill in the art in view of design requirements, the availability of parts, size, etc.

6. Claims 2, 5, 6, 10, 15-18, 20, 22-33, 35-41, 44, 45, 49, 51-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stange et al.

Regarding claims 22 and 36, Stange et al differs from the claimed invention in that it does not disclose an optical resin is used as the recited reflector. However, the specific material used for a reflector would have been obvious to one of ordinary skill in the art since it has been

held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

Regarding claims 24 and 25, the limitations therein are shown in Fig.5.

Regarding claim 28, Stange et al discloses the recited ferrule (43; the block element 43 of Fig.5 of Stange et al should read on the recited ferrule since the specification discloses the block element (112) as a ferrule).

Regarding claim 29, the limitation therein is shown in Fig.5.

Regarding claim 30, Stange et al discloses a photodetector (42).

Regarding claims 32 and 52, the device of Stange et al inherently comprises a feedback loop (Figs.7 and 8).

Regarding claims 53, 54, 59 and 61, Stange et al discloses that the side walls of the recess (51 and 52) are reflective.

Regarding claims 2, 23, 41 and 51, Stange et al differs from the claimed inventions in that it does not disclose optical fibers are used as the recited optical elements. However, the specific elements used as an optical element would have been obvious to one of ordinary skill in the art in view of design requirements, manufacturing cost, the desired accuracy of a device, etc.

Regarding claims 5, 6, 26, 27, 44 and 45, the exact optical elements utilized in the device of Stange et al would have been obvious to one of ordinary skill in the art in view of design requirements.

Regarding claims 10, 31 and 49, the exact light receiving element utilized in the device of Kropp would have been obvious to one of ordinary skill in the art in view of design requirements and the desired performance.

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Regarding claims 15-18, 20, 33, 35, 37-40, 55-58 and 60, the specific shape of a reflector and the exact element used for a reflector would have been obvious to one of ordinary skill in the art in view of design requirements, the availability of parts, size, etc.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Pyo whose telephone number is 703-308-4841. The examiner can normally be reached on Mon-Fri (with flexible hour), First Mon. off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on 703-308-4852. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.



Kevin Pyo
Primary Examiner
Art Unit 2878

Pkk
11/3/03